

Appln No. 09/646,897
Reply to Office Action dated March 31, 2003

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1. (Currently Amended) A composite compound of mineral or organic fillers or pigments, ~~characterised in that it contains which comprises:~~

a) a combination of at least two mineral or organic fillers or pigments, at least one of which has a surface with at least one hydrophilic site and the other at least has at least one organophilic site co-structured or co-adsorbed by being blended with

b) at least one binding agent ~~and in that the mineral or organic fillers or pigments are co-structured or co-adsorbed.~~

Claim 2. (Currently Amended) A The composite compound ~~of mineral or organic fillers or pigments~~ as claimed in claim 1, ~~characterised in that it which is in the form of~~ an aqueous compound solution.

Claim 3. (Currently Amended) A The composite compound ~~of mineral or organic fillers or pigments~~ as claimed in claim 1, ~~characterised in that it which is in the form of~~ a non-aqueous compound solution.

Claim 4. (Currently Amended) A The composite compound ~~of mineral or organic fillers or pigments~~ as claimed in claim 1, ~~characterised in that it which is in the form of~~ a dry compound.

Claim 5. (Currently Amended) A The composite compound of mineral or organic fillers or pigments as claimed in claim 1, characterised in that wherein the binding agent is an organic compound.

Claim 6. (Currently Amended) A The composite compound as claimed in claim 1, characterised in that wherein the binding agent is supported by a gas.

Claim 7. (Currently Amended) A The composite compound as claimed in claim 1, characterized in that wherein the binding agent is selected from among the group consisting of acrylic polymers, or vinyl polymers, and/or their copolymers, their polycondensates, or the polyaddition products such as polymers and/or copolymers, in their totally free acid state or partially neutralised neutralized, or totally neutralised neutralized, of at least one of the monomers such as acrylic acid, and/or methacrylic acid, itaconic, crotonic, fumaric acid, maleic anhydride, or isocrotonic acid, aconitic acid, mesaconic acid, sinapic acid, undecylenic acid, angelic acid, and/or their respective esters, acrylamido methyl propane sulphonic acid, acrolein, acrylamide and/or methacrylamide, methacrylamido propyltrimethyl ammonium chloride or sulphate, methacrylate of trimethylammonium ethyl chloride or sulphate, as well as their acrylate and acrylamide counterparts, quaternised quaternized or not, and/or dimethyldiallylammamonium chloride and vinylpyrrolidone, or a binding agent chosen selected from among group consisting of the linear or branched fatty acids, or the linear or branched fatty alcohols, or the linear or branched or cyclic fatty amines, saturated or unsaturated, or a binding agent chosen selected from among the group consisting of the linear or branched fatty chain quaternary ammonium salts, preferably with linear or branched fatty chains of vegetable origin of not

Claim 8. (Currently Amended) A The composite compound as claimed in claim 1, characterized in that wherein the binding agent is selected from among the group consisting of acrylic or vinyl polymers and/or copolymers in their totally free acid state or partially neutralised, or totally neutralised, obtained by polymerisation polymerization, in the acid state in the presence of one at least one of the mineral or organic particles of the composite compound and optionally in the presence of the a binding agent as claimed in claim 7 of at least one of the monomers such as acrylic acid and/or methacrylic acid, itaconic, crotonic, fumaric acid, maleic anhydride, or isocrotonic, aconitic, mesaconic, sinapic, undecylenic, angelic acid and/or their respective esters, acrylamido methyl propane sulphonie acid, acrolein, acrylamide and/or methacrylamide, methacrylamido propyltrimethyl ammonium chloride or sulphate, methacrylate of trimethylammonium ethyl chloride or sulphate, as well as their acrylate and acrylamide counterparts, quaternised or not, and/or dimethyldiallyl chloride, vinylpyrrolidone or such as the unsaturated linear or branched fatty acids or the linear or branched fatty alcohols or the unsaturated linear or branched or cyclic fatty amines, or the quaternary salts, preferably with unsaturated linear or branched fatty chains or vegetable origin of not .

Claim 9. (Currently Amended) A The composite compound as claimed in claim 1, characterized in that wherein the mineral or organic filler or fillers and pigment or pigments having a surface with at least one hydrophilic site are chosen selected from among the group consisting of the natural calcium carbonates such as chalk, calcite, marble or any other form of natural calcium carbonate, obtained in particular from recycling processes, or from other precipitated calcium carbonate, the dolomites, crystalline or amorphous aluminum

hydroxides, synthetic or natural precipitated silicates, calcium sulphate, titanium dioxides, satin white, the wollastonites, huntite, calcined clays ~~in particular from recycling processes or,~~ starch ~~or alternatively selected from among~~ and organophilic organic or mineral particles that have been subjected to physical or chemical processing so that they have having at least one hydrophilic site.

Claim 10. (Currently Amended) A The composite compound as claimed in claim 1, characterised in that wherein the mineral or organic filler or fillers and pigment or pigments having a surface with at least one organophilic site are selected from among the group consisting of the talcs, micas, clays, ~~whether calcined or not~~, zinc oxide, transparent iron pigments, colouring pigments, synthetic pigments with a polystyrene base, urea-formol resins, carbon black, ~~or~~ the fibres and flour of cellulose ~~or selected from among~~ and hydrophilic mineral or organic particles that have been subjected to physical or chemical processing so that they have having at least one organophilic site.

Claim 11. (Currently Amended) A The composite compound as claimed in claim 1, characterised in that it which contains 0.1 % to 99.0 % by dry weight ~~and preferably 25 % to 95 % by dry weight~~, relative to the total dry weight of the fillers or pigments, of mineral or organic fillers or pigments having a surface with at least one hydrophilic site and 99.9 % to 0.1 % by dry weight ~~and preferably between 75 % and 5 % by dry weight~~, relative to the total dry weight of the fillers or pigments, of mineral or organic fillers or pigments having a surface with at least one organophilic site.

Claim 12. (Currently Amended) A The composite compound as claimed in claim 1, ~~characterised in that it which contains 0.01 % to 10.0 % and preferably 25 % to 95 % by dry weight of the binding agent relative to the total dry weight of the fillers or pigments.~~

Claim 13. (Currently Amended) A The composite compound as claimed in claim 1, ~~characterised in that it which is macroscopically homogeneous.~~

Claim 14. (Currently Amended) A The composite compound as claimed in claim 1, ~~characterised in that it whose yield stress as determined by measuring on a Stress Tech^R machine for measuring viscoelasticity is higher than and preferably at least four times higher than that of the standard corresponding standard mixture of corresponding fillers or pigments.~~

Claims 15-17. (Canceled).

Claim 18. (Currently Amended) An aqueous suspension of mineral or organic fillers or pigments, ~~characterised in that it contains which comprises~~ a composite compound as claimed in claim 1.

Claim 19. (Currently Amended) An The aqueous suspension of mineral or organic fillers or pigments as claimed in claim 18, ~~characterised in that it which is macroscopically homogeneous.~~

Claim 20. (Currently Amended) An The aqueous suspension of mineral or organic fillers or pigments as claimed in claim 18, ~~characterised in that its whose yield stress as determined by measuring on a Stress Tech^R machine for measuring viscoelasticity is higher than and preferably at least four times higher than that of the standard corresponding standard mixture of corresponding fillers or pigments.~~

Claim 21. (Currently Amended) A paper coating color characterised in that it contains which comprises a composite compound as claimed in claim 1.

Claim 22. (Currently Amended) A The paper coating color as claimed in claim 21 characterised in that it which is macroscopically homogeneous.

Claim 23. (Currently Amended) A The paper coating color as claimed in claim 21 characterised in that its whose yield stress as determined by measuring on a Stress Tech^R machine for measuring viscoelasticity is higher than and preferably at least four times higher than the corresponding standard mixture of fillers or pigments.

Claim 24. (Currently Amended) A The paper coating color as claimed in claim 11 21 characterised in that it which has a higher light scattering coefficient S than that of a coating color containing the standard suspensions of the corresponding mixtures.

Claim 25. (Currently Amended) A The paper coating color as claimed in claim 11 21 characterised in that it which has a higher whiteness, determined in accordance with the TAPPI T452 ISO 2470 standard, than that of a coating color containing standard suspensions of the corresponding mixtures.

Claim 26. (Currently Amended) A The paper coating color as claimed in claim 21 characterised in that it which has a higher brightness, TAPPI 75° according to Lehman, than that of a coating color containing the standard suspensions of corresponding mixtures.

Claim 27. (Currently Amended) A The paper coating color as claimed in claim 21 characterised in that its whose curve, determined in accordance with the ISIT printability test and representative of the tack force as a function of time, has smaller rising and falling

gradients than coating colors containing the standard suspensions of the corresponding mixtures and a higher maximum value in terms of tack force.

Claim 28. (Currently Amended) A The paper coating color as claimed in claim 21 ~~characterised in that it which~~ has a higher print density than that of a coating color containing the standard suspensions of the corresponding mixtures.

Claim 29. (Currently Amended) A paper surface-treatment compound ~~as well as wood or metal or plastic or cement surface treatment compounds and/or or an~~ aqueous paint or ~~a non-aqueous compositions~~ composition ~~characterised in that it which~~ contains a composite compound as claimed in claim 1.

Claim 30. (Currently Amended) A The paper surface-treatment compound ~~as well as wood or metal or plastic or cement surface treatment compounds and/or or an~~ aqueous paint or ~~a non-aqueous compositions~~ composition as claimed in claim 29 ~~characterised in that it which~~ is macroscopically homogeneous.

Claim 31. (Currently Amended) A The paper surface-treatment compound as claimed in claim 29 ~~characterised in that its whose yield stress as determined by measuring on a Stress Tech^R machine for measuring viscoelasticity is higher than and preferably at least four times higher than that of the standard corresponding standard corresponding mixture of fillers or pigments.~~

Claim 32. (Currently Amended) The aqueous or non-aqueous paint composition as claimed in claim 29 ~~characterised in that it which~~ has a higher light scattering coefficient S than that of a paint composition containing the standard suspensions of the corresponding mixtures.

Claim 33. (Currently Amended) A The paper surface-treatment compound as claimed in claim 29 ~~characterised in that its~~ whose curve, determined in accordance with the ISIT printability test and representative of the tack force as a function of time, has smaller rising and falling gradients than coating colors containing the standard suspensions of the corresponding mixtures and a higher maximum value in terms of tack force.

Claim 34. (Currently Amended) An uncoated filling composition ~~characterised in that it which~~ contains a composite compound as claimed in claim 1.

Claim 35. (Currently Amended) A sheet of base paper to be coated, ~~characterised in that it~~ contains the uncoated filling composition as claimed in claim 34.

Claim 36. (Currently Amended) A The sheet of base paper as claimed in claim 35, ~~characterised in that it which~~ has a higher opacity determined in accordance with the DIN 53146 standard than that of a sheet of paper containing the standard suspensions of corresponding mixtures.

Claim 37. (Currently Amended) A The sheet of paper as claimed in claim 35, ~~characterised in that it which~~ has a higher whiteness, determined in accordance with the TAPPI T452 ISO 2470 standard than that of a sheet of paper containing the standard suspensions of corresponding mixtures.

Claim 38. (New) A The composite compound as claimed in claim 11, which contains 25 % to 95.0 % by dry weight, relative to the total dry weight of the fillers or pigments, of mineral or organic fillers or pigments having a surface with at least one hydrophilic site and 75 % to 5 % by dry weight, relative to the total dry weight of the fillers or pigments, of mineral or organic fillers or pigments having a surface with at least one organophilic site.

Claim 39. (New) The composite compound as claimed in claim 12, which contains 25 % to 95 % dry weight of the binding agent relative to the total dry weight of the fillers or pigments.

Claim 40. (New) The composite compound as claimed in claim 14, whose yield stress is at least four times higher than that of the standard mixture of corresponding fillers or pigments.

Claim 41. (New) The aqueous suspension of mineral or organic fillers or pigments as claimed in claim 20, whose yield stress is higher than at least four times-higher than that of the standard mixture of corresponding fillers or pigments.

Claim 42. (New) The paper coating color as claimed in claim 23 whose yield stress is at least four times higher than the corresponding standard mixture of fillers or pigments.
which is macroscopically homogeneous.

Claim 43. (New) The paper surface-treatment compound as claimed in claim 31 whose yield stress is at least four times higher than that of the standard corresponding mixture of fillers or pigments.

Claim 44. (New) A composite compound of mineral or organic fillers or pigments, which comprises:

- a) a combination of at least two mineral or organic fillers or pigments, at least one of which has a surface with at least one hydrophilic site and the other at least has at least one organophilic site co-structured or co-adsorbed by being blended with
- b) at least one binding agent selected from the group consisting of acrylic or vinyl polymers and/or copolymers or polycondensates or polyaddition products in their free acid

state or partially neutralized or totally neutralized by neutralizing agents containing monovalent or polyvalent cations or mixtures thereof, by one at least of the monomers of acrylic acid and/or methacrylic, itaconic, crotonic, fumaric acid, isocrotonic, aconitic, mesaconic, sinapic, undecylenic, angelic acid and/or the respective esters thereof, maleic anhydride, acrylamido methyl propane sulphonic acid, acrolein, acrylamide and/or methacrylamide, methacrylamido propyltrimethyl ammonium chloride or sulphate, methacrylate of trimethylammonium ethyl chloride or sulphate, their acrylate and acrylamide counterparts, optionally quaternised, and/or dimethyldiallyl ammonium chloride and vinylpyrrolidone or selected from the group consisting of the linear or branched fatty acids, the linear or branched fatty alcohols, the linear or branched fatty amines, optionally saturated, and linear or branched fatty chain quaternary ammonium salts.